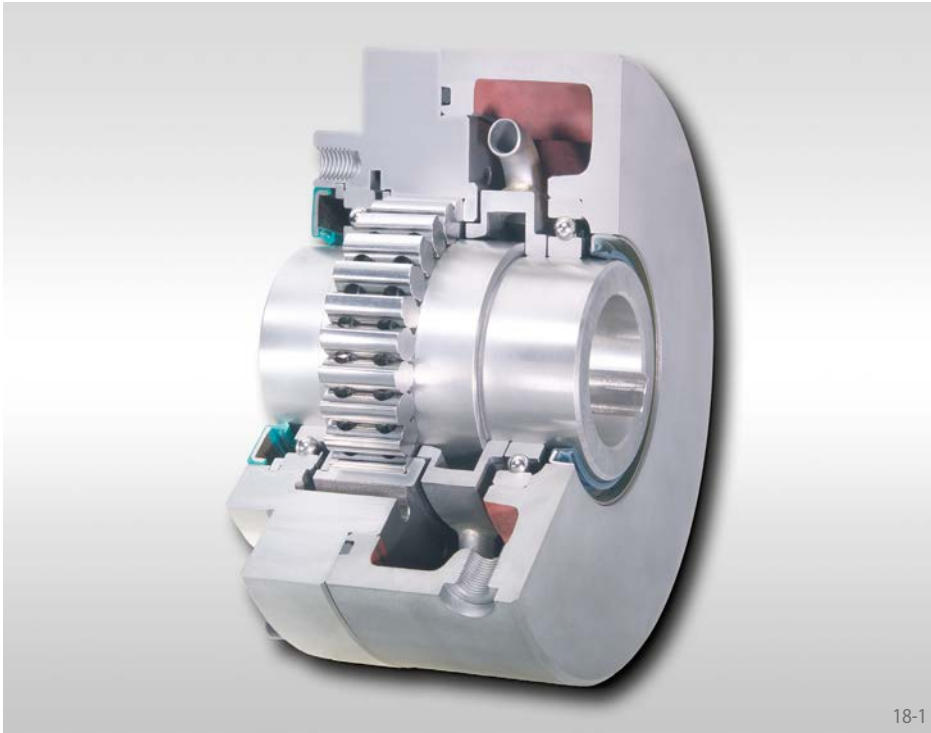


Complete Freewheels FK_h

for bolting to the face
with hydrodynamic sprag lift-off for multi-motor drives



18-1

Application as

▶ Overrunning Clutch

at high speeds, which are the same or similar in freewheeling operation and in driving operation.

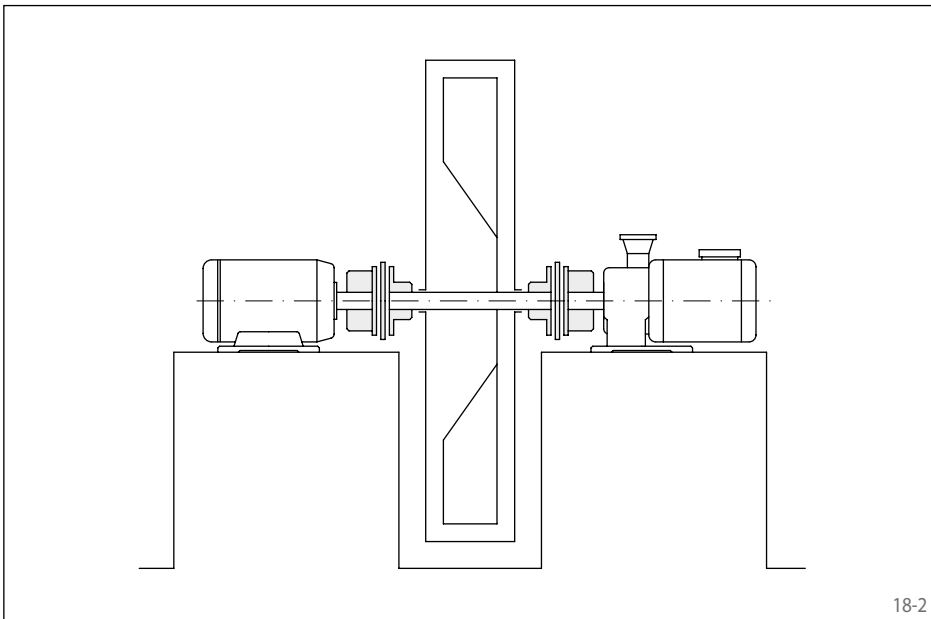
Features

Complete Freewheels FK_h with hydrodynamic sprag lift-off are typically used in installations where an assembly can be driven from two or more motors or turbines at the same or similar high speed.

Complete Freewheels FK_h are sealed sprag freewheels with ball bearings. They are supplied oil-filled and ready for installation, on customer request with biodegradable oil.

Nominal torques up to 14 000 Nm.

Bores up to 95 mm.

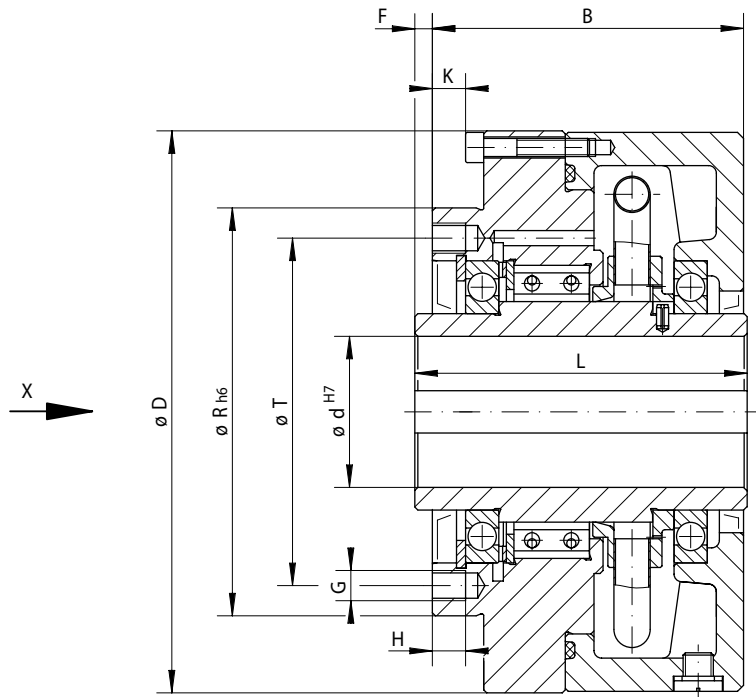


18-2

Application example

Two Complete Freewheels FK_h 28 ATR as overrunning clutches in the drive system of a fan. The fan can be driven either by an electric motor or by a turbine. The freewheels between the fan and the two drive assemblies automatically engage the working drive with the fan and in each case disengage the drive that is no longer giving power. The freewheels replace actuated clutches, which require an additional activation when changing over from one drive to another. The hydrodynamic sprag lift-off is the most suitable type for a wear-free freewheeling operation if the speeds in driving operation are the same or similarly high to those speeds in freewheeling operation.

for bolting to the face
with hydrodynamic sprag lift-off for multi-motor drives



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Overrunning Clutch	Type with hydrodynamic sprag lift-off For extended service life using sprag lift-off at high speed rotating outer ring	Dimensions														

Freewheel Size	Type	Nominal torque M_N Nm	Max. speed Outer ring overruns min ⁻¹	Max. speed Inner ring drives min ⁻¹	Bore d Standard mm	Bore d max. mm	B mm	D mm	F mm	G** mm	H mm	K mm	L mm	R mm	T mm	Z**	Weight kg
FKh 24	ATR	1 100	3 000	3 000	35	40*	90	170	1,0	M10	11	9	95	135	115	6	9,6
FKh 28	ATR	1 800	2 000	2 000	45	50*	103	186	1,0	M10	11	11	105	135	115	12	14,0
FKh 94	ATR	2 500	1 800	1 800	60	60	112	210	7,0	M10	16	9	120	170	150	10	19,0
FKh 106	ATR	4 200	1 600	1 600	70	75*	116	250	7,5	M12	18	8	125	200	180	12	25,0
FKh 148	ATR	7 000	1 600	1 600	80	95*	156	291	7,5	M16	25	9	165	250	225	12	52,0
FKh 2.53	ATR	14 000	1 600	1 600	90	95*	241	345	2,0	M16	25	6	245	250	220	16	98,0

The maximum transmissible torque is 2 times the specified nominal torque. See page 14 for determination of selection torque.

Keyway according to DIN 6885, page 1 • Tolerance of keyway width JS10.

* Keyway according to DIN 6885, page 3 • Tolerance of keyway width JS10.

** Z = Number of tapped holes G on pitch circle T.

Mounting

The customer attachment part is centered on the diameter R and then bolted on to the face.

The installation must invariably take place in such a way that the drive (driving operation) is carried out via the inner ring and the outer ring overruns in freewheeling operation.

The tolerance of the shaft must be ISO h6 or j6 and the tolerance of the pilot diameter R of the attachment part must be ISO H7 or J7.

Example for ordering

Freewheel size FKh 28, type with hydrodynamic sprag lift-off and 45 mm bore:

- FKh 28 ATR, d = 45 mm

When ordering, please also specify the freewheel direction of the outer ring when viewed in direction X:

- counter-clockwise free or
- clockwise free